

Kidney dysfunction linked to heart failure with preserved ejection fraction

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Mild and moderate kidney dysfunction are associated with left ventricular diastolic dysfunction and heart failure with preserved ejection fraction (HFpEF), according to a study published online Nov.

27 in *ESC Heart Failure*.

Robin W.M. Vernooij, Ph.D., from Utrecht University in the Netherlands, and colleagues examined the association between kidney dysfunction and left ventricular diastolic dysfunction parameters and HFpEF. Estimated [glomerular filtration rate](#) (eGFR) was calculated based on creatinine and cystatin C without race. Multivariable adjusted regression models were used to test the association between eGFR and E/e', left ventricular mass index, relative wall thickness, and stage C/D heart failure. Data were included for 880 participants with a mean age of 62.9 years; 406 participants had mild or moderate kidney dysfunction (37.6 and 8.5%, respectively).

The researchers found that the prevalence of HFpEF was significantly higher in those with mild and moderate kidney dysfunction versus those with normal kidney function (10.3 and 16.0%, respectively, versus 3.4%). There was an association observed for higher E/e' and higher relative wall thickness values with a lower kidney function. Compared with those with normal kidney function, those with moderate kidney dysfunction had a higher likelihood of American College of Cardiology/American Heart Association stage C/D [heart failure](#) (odds ratio, 2.07).

"We found an association between moderate and mild kidney dysfunction, and diastolic dysfunction and HFpEF, independent of other [risk factors](#)," the authors write. "This association was already present for mild kidney dysfunction, and stronger for moderate [kidney dysfunction](#)."

More information: Robin W. M. Vernooij et al, Association of mild kidney dysfunction with diastolic dysfunction and heart failure with preserved ejection fraction, *ESC Heart Failure* (2023). [DOI: 10.1002/ehf2.14511](#)

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